



Mergers and Acquisitions Performance of Hotel and Lodging Industry

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BIOGRAFICAL NOTE

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ABSTRACT

Mergers and acquisitions activity has been increasing impressively in the past decades originating significant research interest. Though, the results obtained from previous studies regarding acquirers' post-acquisition returns are contradictory. Therefore, it remains unclear whether the shareholders of acquiring firms profit from M&A.

While there is a significant body of research in the M&A performance there is only a scarce number of studies regarding the performance of hotel and lodging companies. Additionally, most of these studies have analysed the short-term impact of mergers on stock returns, while the long-term influence of mergers on equity value of acquiring firms in the hotel and lodging industry has been reasonably ignored.

Considering the lack of studies regarding post-acquisition performance of the lodging industry, this dissertation, will use newly available data to address the shortage of literature, namely on long-term performance. This study aims to help financial stakeholders within the industry and broaden the existent literature regarding M&A of listed firms within the hotel industry.

The results of this study suggest that the acquisition of hotel and lodging firms by other firm of the same industry do not generate value to the acquiring firms' shareholder as the impact on the short and long-term performance of acquiring firm is mostly neutral.

Keywords: hospitality industry; long-term performance; acquiring firms; financial performance; operational performance; hotel company; performance measures.

JEL-codes: G14, G34.

SUMÁRIO

A atividade de fusões e aquisições tem crescido de forma impressionante nas últimas décadas, originando um significativo interesse na sua investigação. No entanto, os resultados obtidos em estudos anteriores sobre os retornos pós-aquisição das empresas adquirentes são contraditórios. Portanto, há incertezas quanto a se os acionistas das empresas adquirentes lucram efetivamente com fusões e aquisições.

Embora haja um número significativo de estudos sobre o desempenho das F&A, apenas há um diminuto número de estudos relacionados com o desempenho das empresas do sector da hotelaria e hospedagem. Adicionalmente, a maioria destes estudos analisaram o impacto a curto prazo das F&A sobre os rendimentos de capital próprio, enquanto que o impacto a longo prazo das F&A sobre o valor patrimonial das empresas adquirentes no sector hoteleiro e hoteleiro foi escassamente estudado.

Considerando a heterogeneidade das informações disponíveis sobre o desempenho pós-aquisição do setor da hotelaria e hospedagem, é oportuno estudá-lo com dados recém-disponíveis e abordar a escassez de literatura sobre o desempenho a longo prazo. Este estudo visa ajudar os *stakeholders* financeiros dentro da indústria e ampliar a literatura existente sobre F&A de empresas cotadas dentro da indústria hoteleira.

Os resultados deste estudo sugerem que o desempenho a curto e longo prazo da aquisição de hotéis não gera efeitos lucrativos, uma vez que os resultados indicam efeitos maioritariamente neutros.

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1. INTRODUCTION

Over the past decades, M&A research is trying to establish if whether M&A maximizes the firm's value or not. On one hand, M&A can benefit firms with several sources of synergies; cost reduction, lower taxes, and lower cost of capital (Ross et al., 2002). However, on the other hand, M&A can also have the potential to harm firms, due to overpayment, slow pace of integration and poor strategy (Roll, 1986).

Concerning the acquisitions in the hotel and lodging industry, there has been over 13,000 deals valuing a total of 775.1 billion USD since 1985¹, growing impressively in both size and number of deals during this period². According to Kwansa (1994), M&A in the hotel and lodging sector was the path for growth and preserving market share, since markets were saturated and the fixed costs of new concept development were high. The continuous consolidation allowed large companies to become even larger through M&A (Hsu and Jang, 2006).

While there is several number of deals in the hotel and lodging industry, the number of studies regarding the performance of hotel and lodging companies before and after the deals is scarce. Although, there is an agreement that targets' post-acquisition performance is positive (Kwansa, 1994; Canina, 2001; Kim, 2006; Kim et al., 2008), regarding the acquirers' post-acquisition performance there is a feud. Some studies found evidence that acquirers gained from M&A activity (Canina, 2001; Yang et al., 2009; Ma et al., 2011; Chatfield et al., 2012), while others found the opposite (Andrew, 1988; Sheel and Nagpal, 2000; Hsu and Jang, 2006; Kim, 2006; Kim et al., 2008). Furthermore, most of these studies have analysed only the short-term impact of mergers on equity using stock returns measures (Andrew, 1988; Kwansa, 1994; Sheel and Nagpal, 2000; Canina, 2001; Kim et al., 2008; Ma et al., 2011; Chatfield et al., 2012), while the long-term influence of mergers on equity value of acquiring firms in the hotel and lodging industry has been reasonably ignored (Ma et al., 2011).

Appropriately, considering the past three decades of sharp increase in the M&A activities of hotels and lodging companies in history plus the mixed information

¹ Source: *Institute for Mergers, Acquisitions and Alliances (IMAA)*. <https://imaa-institute.org/m-and-a-by-industries/>

² See annex 1.

available regarding post-acquisition performance of the lodging industry, this dissertation, using newly available data, will address this gap on long-term performance. This study aims to help financial stakeholders within the industry and broaden the existent literature regarding M&A of listed firms within the hotel and lodging industry.

This study aims to answer the following: Does hotel operational and shareholder's performance increase after acquiring another hotel?

The results regarding the short and long-term performance of acquiring hotel and lodging firms after the acquisitions are neutral and so suggest that neither the hotel operational performance nor the shareholder's performance increase after the acquisition of another hotel.

After this introduction, the remainder of this dissertation is organized as follows. In section 2 we review the existent empirical evidence related to this topic while in section 3 we present the methodology. In section 4 the sample collection process is explained while in section 5 are presented the results obtained. Finally, in section 6, conclusion, limitations and future references are depicted.

2. LITERATURE REVIEW

In this chapter, we present an overview of the literature regarding the overall M&A post-acquisition performance and more precisely on the hotel and lodging post-acquisition performance.

2.1 M&A Performance

Many studies tested whether M&A activity increases shareholders' wealth around the announcement day and on the long-term.

There is a unanimous consensus that shareholders of the target companies generally benefit from mergers and acquisitions, mainly due to the premium received by selling their shares³.

On the contrary, the results obtained regarding acquirers' post-acquisition returns are contradictory. Prior studies typically reported significantly negative long-term results⁴ or found no abnormal returns on the long-term⁵. Very few studies found evidence of positive abnormal returns⁶ and only Malatesta (1983) and Yaghoubi et al. (2014) found evidence of negative abnormal returns on the short-term. Regarding the market sample, studies in the USA and the UK typically report slightly negative and insignificant abnormal returns for acquirers (Yaghoubi et. al., 2016).

However, most of these studies have analysed the impact of M&A on stock returns and so it remains unclear whether acquiring firms profit from M&A in the long run.⁷

³ For example, Asquith (1983), Malatesta (1983), Franks and Harris (1989), Firth (1980), Limmack (1991) and Franks et al. (1991).

⁴ For example, Langetieg (1978), Asquith (1983), Agrawal et al. (1992), Jensen and Ruback (1983), Firth (1980), Limmack (1991), Buhner (1991), Kennedy and Limmack (1996), Gregory (1997), Loughran and Vijh (1997), Mitchell and Stafford (2000), Sudarsanam and Mahate (2003), Aw and Chatterjee (2004), Croci (2007) and Bouwman et al. (2009).

⁵ For example, Franks et al. (1991), Loderer and Martin (1992), Franks et al. (1977), Dodd and Ruback (1977), Franks and Harris (1989), Higson and Elliott (1998), Chatterjee (2000), Datta et al. (2001), Andrade et al. (2001), Conn et al. (2004) and Gregory and McCorriston (2005).

⁶ For example, Mandelker (1974), Moeller et al. (2004) and Healy et al. (1992).

⁷ See annex 2 and 3.

2.2 Motives for Mergers and Acquisitions

According to Yaghoubi et. al (2016), the motives for a merger or an acquisition can be gathered into four groups: managerial theories, industry-level theories, economic conditions and behavioural theories.

First, the managerial theories state that managers of acquiring firms engage in mergers due to their overconfidence or self-interest and the post-merger performance is expected to decline. Examples of this are the agency theory and the management entrenchment hypothesis that states that value destroying acquisitions may be driven by self-interested managers (Morck et al., 1990) and the envious managers' hypothesis that denotes that envious managers undertake value-destroying acquisitions but size-enhancing acquisitions (Goel and Thakor, 2010).

Second, the industry-level theories explained the existence of mergers and acquisitions to industry-level aspects, such as industry shocks or distribution of firm sizes within an industry. For instance, the economic disturbance theory indicates that economic shocks create divergences in valuation of stocks which consequently produce merger waves (Gort, 1969), the neoclassical theory (industry shocks hypothesis) that states that industry shocks that drive mergers could improve or deteriorate the industry firms (Harford, 2005; Mitchell and Mulherin, 1996) and the 'eat-or-be-eaten' theory (merger anticipation hypothesis) suggested by Gorton et al. (2009) that states that a merger or acquisitions can be a defensive strategy resulting in merger waves that are expected to be value-destroying and harm the post-acquisition performance.

Third, the economic conditions, such as the emergence of general-purpose technologies, the changes in anti-trust policies and the changes in bankruptcy regulations. For example, the Q theory of mergers that denotes that high-Q acquirers overall create higher profits announcement returns from mergers (Lang et al., 1989; Jovanovic and Rousseau, 2002, 2008; Servaes, 1991) and the dynamic model of takeover activity presented by Toxvaerd (2008) indicating that the timing of merger activity should be determined by beneficial economic conditions and the risk of being anticipated by bidder competitors.

Finally, the behavioural theories, that suggest that bidders take advantage of mispricing of stocks acquiring undervalued firms using their own overvalued stocks

(Shleifer and Vishny, 2003). One evidence of the existence of theory market-driven mergers is that, according to several authors⁸, stock acquisitions tends to produce negative results while cash acquisitions are expected to generate positive returns.

Regarding the facts that significantly impact the mergers and acquisitions in the lodging industry, Kim and Olsen (1999) concluded that the most important objective of M&As in the lodging industry is to accelerate growth of the acquiring company, followed by the enhancement of stockholders' value. Next, the objectives are to expand capacity at less cost than constructing new hotel properties, then is to capture scale economies to save costs through the combination of two firms within an industry, to broaden the acquiring company's customer base by extending products and services (i.e., application of portfolio management, globalization), to improve credit capacity of resultant company and to achieve the personal goals, vision, and particular objectives of the acquiring company's chief executive.

2.3 Hotel and Lodging Performance

According to Kwansa (1994), the first empirical study ever conducted related with hotel and lodging industry mergers was done by Andrew (1988). His study tries to determine whether additional wealth accruing to shareholders of hospitality firms looking for diversify through acquisitions, during the period between 1975 and 1986. His conclusions showed that the acquiring hospitality firms lost value during the 20 days prior to the acquisitions announcement, differing from the target firms that gained value during the same period (Andrew, 1988) (*Apud* Kwansa, 1994).

2.3.1 Short-Term Studies⁹

Kwansa (1994) examined the wealth earned by shareholders of target lodging firms in the 1980s using a sample of 18 hotel firms. The results show that the shareholders of target hotels benefited from the acquisition announcements, with a total

⁸ For example, Rhodes-Kropf et al. (2005), Rhodes-Kropf and Viswanathan (2004) and Shleifer and Vishny (2003).

⁹ See annex 4.

CAR equal to 31.5% and significantly different from zero at the 0.01 level of significance through the event window.

Canina (2001) extended the sample data studied by Kwansa (1994) through 1999 and analysed mergers and tender offers separately. Her research covered stockholders of both acquiring and target companies, involving both public and private firms in the hotel and hotel real estate investment trust (REIT) industries. The results showed positive abnormal returns in the merger announcement day for both acquirers (1.3%) and targets (8.9%) in the lodging industry. Moreover, the reaction to tender offers announcements compared to mergers announcements is significantly greater for both acquirers (3.6% compared to 0.9%) and targets (14.1% compared to 5.6%).

Using the same methodology used by Sheel and Nagpal (2000), Hsu and Jang (2006) investigated the financial performance of acquiring firms in the lodging industry between 1985 and 2000. The sample size for the market measure analysis comprised 15 acquiring firms and the empirical findings indicated no abnormal returns for the acquiring firms in the short-term.

Kim (2006) examined the short-term post-acquisition performance of both acquirers and target firms in the hotel and restaurant industries between 1980 and 2004, using event study method. The results found negative returns for the acquiring hotel firms ($CAR_{-10}^{+10} = -17.05$) and positive returns for the target hotel firms ($CAR_{-10}^{+10} = 33.26$) around acquisition announcements.

Kim et al. (2008), using the same data sample and the event study approach of Kim (2006), found a little increase in the shareholders' value of acquiring hotel firms ($CAR_{-10}^{+10} = 24.7\%$) and positive returns for the shareholders of the target hotel firms ($CAR_{-10}^{+10} = 116.9\%$) around acquisition announcements. Nevertheless, the descriptive statistics indicated that M&A announcements have a little positive impact on both target and acquirers despite the fact they are not statistically significant.

More recently, Ma et al. (2011) examined the stock performance of 452 firms acquiring listed and unlisted lodging firms between 1981 and 2006. The empirical findings showed that shareholders' value of acquiring lodging firms increases on average, acquiring unlisted lodging firms creates more value than acquiring a listed one, managers should acquire the largest unlisted lodging firms and acquisitions should be paid mostly in stock.

Chatfield et al. (2012) studied the returns around announcements period to measure the impact of payment method in the success of hospitality mergers and acquisitions. Their sample comprised 282 bidding public hospitality firms from 1985 to 2004. The authors generally concluded that shareholders of acquiring firms gain positive and significant returns when M&As are paid by cash and that stock or mixed payments produce returns that are not statistically different from zero, as opposed to the findings of Ma et al. (2011).

2.3.2 Long-Term Studies¹⁰

Differing from the previous studies, Sheel and Nagpal (2000) analysed the long-term impact of acquisitions on the shareholders' value of acquiring firms in the hospitality industry for the period from 1980 to 2000. Overall, the CAR decreased significantly in the long-term ($CAR_{+36month} = -176.76\%$) and the total CAR for the acquiring firms was found to be negative, indicating that shareholders of acquiring hospitality firms gained negative abnormal returns after mergers and acquisitions.

Hsu and Jang (2006) investigated also the long-term financial performance of acquiring firms in the lodging industry between 1985 and 2000. They employed accounting measures, including Return on Assets (ROA) and Return on Equity (ROE) to access the overall (long-term) operating performance of the acquirers and the sample size comprised 23 firms. The empirical findings from this study showed that ROA, ROE and the long-term shareholders' value of acquiring firms declined significantly after mergers. Accordingly, this study found no abnormal returns for the acquiring lodging firms, showing financial deterioration after mergers, which is consistent with the findings of Sheel and Nagpal (2000).

Kim (2006) examined also the long-term (3-year and 5-year) post-acquisition performance of both acquirers and target firms in the hotel and restaurant industries between 1980 and 2004, using accounting-based measures. The results found no statistical differences in terms of profitability and efficiency and the growth rate of acquiring firms decreased significantly after mergers and acquisitions, indicating that shareholders of acquiring firms do not benefit from mergers and acquisitions.

¹⁰ See annex 5.

Yang et al. (2009) investigated the long-term performance of 19 acquiring hotel firms from 1996 to 2007. This study aims to find how the financing method affects the returns in the long-term. The results showed that hotel industry acquirers gain positive abnormal returns 12 months' post-acquisition and that the method of payment have no impact in the post-acquisition returns for the acquirer firms.

Finally, Kim and Canina (2013) analysed the acquisition premiums and performance improvements for the targets and acquirers in the lodging industry between 1991 and 2009. Differently from the previous studies, they used a selection model and then a multivariate regression. Nonetheless, this study was not able to link the announcement returns and realized performance improvements in post-acquisition period. They reach the conclusion that if the premium was excessive relative to the acquirer's synergy gain, the acquirer would have experienced a negative announcement return while the target would have experienced a positive return due to the premium (Kim and Canina, 2003).

2.3.3 Literature Gap

While there is a significant body of research in the M&A performance there is only a scarce number of studies regarding the performance of hotel and lodging companies.

There is an agreement that targets' post-acquisition performance is positive (Kwansa, 1994; Canina, 2001; Kim, 2006; Kim et al., 2008), nonetheless, regarding the acquirers' post-acquisition performance the results are mixed. Some studies found evidence that acquirers gained from M&A activity (Canina, 2001; Yang et al., 2009; Ma et al., 2011; Chatfield et al., 2012) while others found the opposite (Sheel and Nagpal, 2000; Hsu and Jang, 2006; Kim, 2006; Kim et al., 2008).

Most of these studies have analysed the short-term impact of mergers on equity returns using only stock market returns around the announcement (Kwansa, 1994; Sheel and Nagpal, 2000; Canina, 2001; Kim et al., 2008; Ma et al., 2011; Chatfield et al., 2012), while the long-term influence of mergers on equity value of acquiring firms in the hotel and lodging industry has been reasonably ignored.

The studies using accounting-based measures have analysed a short amount of data that is not sufficient to generate a conclusive investigation. Sheel and Nagpal

(2000) sample comprised 21 firms, Hsu and Jang (2006) studied 23 firms, Yang et al. (2009) studied 19 firms and Kim (2006) only analysed a sample of 5 hotel firms.

Many researchers have been criticising the use of only stock market measures to define the success or failure of the M&As since the changes in the stock prices around the announcement days do not reveal the real benefits from the mergers (Dickerson et al., 1997; Scherer, 1988). Nevertheless, the accounting-based measures are somewhat limited because it takes an extant number of years until it reflects in profitability the effects of the merger. Additionally, this measure has the shortcoming of not isolating the effect of a specific event such as a merger (Biggadike, 1979; Lubatkin, 1983).

Considering the mixed information available concerning post-acquisition performance of the hotel and lodging industry, it is appropriate to investigate it with newly available data, with the proper stringent methodology that strives to capture the true effects of M&As, particularly on the long-term performance and to use a bigger sample to allow us to make statistical significant conclusions.

3. METHODOLOGY

The performance measures discussed in this section are divided into two groups based on the literature review. One is the market-based performance measures and the other is the accounting-based performance measures, with the first relying on market data and the latter on accounting information (Gross, 2007). In this study, we are going to analyse the short-term impact of M&A deals in shareholders' wealth performing an event study based on the cumulative average abnormal return (CAAR) around the announcement day and the long-term impact through a univariate and a multivariate analysis using accounting data.

3.1 Short-Term Measures

The market-based performance (or financial performance) analysis measures the reaction of stock prices of acquirers and targets to merger announcements (Rhoades, 1994). The main method used is the event study (or residual analysis). This method studies the stock price behaviour around specific events and the reaction to such events (Binder, 1998), i.e., it captures the wealth effects of mergers and acquisitions.

Essentially, the event study method isolates an event that has occurred in a firm from all other events and measures its effect on stock price, since the stock prices quickly reflect all available information. According to Kwansa (1994, p. 18):

“This is accomplished by first predicting what would ordinarily have happened to share price in the absence of the event. This value represents the “normal” return to the stock and it is compared to what actually happens to the share price during the period when the event is unfolding. The difference between these two values constitutes the “abnormal” return or the additional wealth created for the shareholder as a result of the event.”

Therefore, the event study approach compares the stock price performance against an estimation of expected (or normal) return based on prior performance. Then, it is concluded that shareholders value is affected by mergers and acquisitions

announcements when the observed and the expected returns are statistically different from each other (Kim et al., 2008).

The market model is founded on the capital asset pricing model (CAPM) and exploits the ordinary least square estimator. Furthermore, when measuring the excess returns the market model considers the past performance of the stock and the sensitivity to the overall market changes (Kim et al., 2008).

3.1.1 Cumulative Abnormal Returns

The difference between the actual return (R) and the expected (or normal) return ($E(R)$), for each day and company, represent the effect of the announcement bid, the abnormal return (AR):

$$AR = R - E(R) \quad (1)$$

The expected (or normal) return of the stock, according to the market model, is written as:

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} \quad (2)$$

where:

$E(R_{i,t})$ - expected return of the share of acquiring firm i on day t ;

α_i - intercept, measure of the average return of shares of acquiring firm i that is not explained by the market return during the moment t ;

β_i - coefficient or slope, measure of the sensibility of the volatility of shares of acquiring firm i towards the market volatility;

$R_{m,t}$ - return of the market index at day t .

The daily abnormal returns and cumulative abnormal return should fluctuate around zero since the daily abnormal return is the mean of the difference between the actual returns and the expected returns. Otherwise, it is concluded that the announcement event influenced stock price valuations of the market (Peterson, 1989; Armitage, 1995; MacKinlay, 1997). Accordingly, the daily abnormal returns are calculated as:

$$AR_{it} = R_{it} - E(R_{it}) = R_{it} - \alpha_i - \beta_i R_{mt} \quad (3)$$

where:

AR_{it} - abnormal return of the share of acquiring firm i for day t ;

R_{it} - observed or actual return of the share of acquiring firm i for day t ;

$E(R_{it})$ - estimated return of the share of acquiring firm i for day t which is derived from the equation (2).

Using the equation (3), the abnormal return for each event day is then averaged across all companies in the sample to calculate the cumulative abnormal return (CAR_i) of a certain event window since the day $t = 1$ until the last day of the window:

$$CAR_i = \sum_{t=1}^N AR_{it} \quad (4)$$

Lastly, to have the impact of the bid announcement in the shareholders' wealth, the cumulative abnormal returns are summed over the event window period and divided by the total number of firms in the sample (N). Then, we obtain the cumulative average abnormal returns ($CAAR$) of all acquiring firms, using the following formula:

$$CAAR = \frac{\sum_{t=1}^N CAR_i}{N} \quad (5)$$

An important concern to take into account in this method is the decision of the event window period, since it captures the effect of mergers on the stock prices (Kim et al., 2008; Martynova et al., 2011). However, the event window period that should be used is not consensual. In addition to the possible abnormal returns after the announcement day it is also essential to analyse if there are also possible abnormal returns before the announcement day, since some information may be revealed through rumours or private information (Martynova et al., 2011). With a very small event window we might ignore information published before the announcement in media, while a lengthy window might mistakenly include former positive movements in the acquiring firm's stock price. We have considered several event windows ($[-10; +5]$, $[-10; -5]$, $[-5; 0]$ and $[0; +5]$) to reduce biases and improve the analysis of the impact of M&A.

Regarding the market model parameters, the Ordinary Least Squares (hereafter OLS) method is going to be used to estimate them for each firm. The parameters α and β were estimated using market returns and realized share returns over the pre-event

period. We used the MSCI World Index as a proxy of the market return as our sample includes acquiring firms listed in different indexes worldwide. Our estimation window has 251 days (from day -262 to -11). It is important to have an extensive estimation window since it is presumed that the market model parameters are constant throughout the event window and the estimation period. The OLS regression uses the estimators \hat{R}_{it} and \hat{R}_{mt} during the estimation window that were obtained using a logarithm transformation to approximate the returns to normality (Henderson, 1990):

$$\hat{R}_{it} = \ln \left(\frac{P_t}{P_{t-1}} \right) \quad (6)$$

$$\hat{R}_{mt} = \ln \left(\frac{I_t}{I_{t-1}} \right) \quad (7)$$

where:

P_t - market price of the share of acquiring firm I on day t ;

P_{t-1} - market price of the share of acquiring firm i on the day before day t ;

I - Index value on day t ;

I_{t-1} - Index value on the day before day t .

The expected returns were also estimated using the Market-adjusted model (MAM) and the Constant Mean Return model (CMRM). The market-adjusted model is a market model with restrictions (MacKinlay, 1997) but is more simple as the effect of the general market in the stock market price (normal or expected return) is not adjusted for the company risk and so the expected return is equal to the market return ($\alpha = 0$ and $\beta = 1$):

$$E(R_{i,t}) = R_{m,t} \quad (8)$$

Regarding the CMRM, this model considers that the expected return of each acquirer's share is equal to the historical mean over the estimation period:

$$E(R_{i,t}) = \frac{\sum_{t=-262}^{t=-11} R_{i,t}}{251} \quad (9)$$

According to Brown and Warner (1985), besides the fact of the CMRM being considered simple and very restrictive, when compared to other more complex models

the results not diverge from one another, which makes it a useful model to be applied in this dissertation.

To test the significance of the abnormal returns obtained a parametric test is going to be used. If the cumulative average abnormal returns (*CAARs*) have a normal distribution and are independently and identically distributed over time, the test statistics for the null hypothesis has a t-Student distribution (Brown and Warner, 1985). The rejection of the null hypothesis ($H_0: CAAR = 0$) verifies if the event had impact for shareholders.

$$CAAR \sim N(0, \sigma) \quad (10)$$

$$t_{stat} = \frac{CAAR}{\hat{S}(CAR)} \quad (11)$$

$$\hat{S}(CAR) = \sqrt{\frac{1}{N-1} \sum_{i=1}^N (CAR_i - CAAR)^2} \quad (12)$$

where:

t_{stat} - t-student test statistic with $n-2$ degrees of freedom for the market model;

CAAR - cumulative average abnormal returns;

CAR_i - cumulative abnormal return of firm i , $i = 1, \dots, N$;

N - total number of acquiring firms with available abnormal returns;

$\hat{S}(CAR)$ - standard deviation of *CAR*, an unbiased estimator of standard deviation of population (σ).

To better interpret the findings, we will also use a non-parametric test the Wilcoxon signed-rank test (Wilcoxon, 1945) to test the statistical significance of the CAR parameter. The non-parametric test is less demanding on the sample behaviour but is not affected by outliers, therefore it produces robust results. According to Serra (2004), this test considers that both the sign and the magnitude of abnormal returns are fundamental so, this non-parametric test considers the absolute value of abnormal returns ($H_0: median = 0$) and the test statistics is assumed to approximately follow a normal distribution when the number of observations is large:

$$z \sim N(0, \sigma) \quad (13)$$

$$E(z) = \frac{N(N+1)}{4} \quad (14)$$

$$\sigma^2(z) = \frac{N(N+1)(2N+1)}{24} \quad (15)$$

$$z = \sum_{i=1}^N r_i \quad (16)$$

where:

z - statistics for the Mann-Whitney rank test;

r_i - abnormal return for the observation i ;

N - number of observations i in a certain event window.

3.2 Long-Term Measures

The event study methodology can be used to examine both short and long-term abnormal performance, however, several concerns arise when it is used to analyse the long-term performance (Andrade et al., 2001; Martynova et al., 2008). For instance, the statistical significance of the findings vary according the type of benchmark model used and on the long-term shareholders' gains are affected by several different factors which makes it difficult to isolate the M&A effect (Campa and Hernando, 2004). If we consider that the markets are efficient, in the long-term the abnormal returns may not exist, resulting in the total abnormal performance being, on average, the period over the announcement event (Franks et al., 1991).

To study the long-term performance of a M&A, we will apply, alternatively, a methodology that used an operating/accounting performance measure as benchmark for the success/failure of the acquisition. This method considers the accounting data before and after the deal and examines the changes in the acquiring firm performance. The acquiring firm's cash flow is expected to be impacted when the expected gains at the deal announcement are realized, implying value generation to the firm (Andrade et al., 2001).

The operating performance approach allows the investigator to concentrate on costs and efficiency, which has the advantage of focusing on real observed operating effects rather than the expectations over the announcement period.

There are also some problems inherent to this methodology, like the fact that studies using this method generally analyses operating performance over long periods

after the M&A deal and through all the period, many factors may impact the firm's efficiency or general performance that is not related to the merger itself. Still, this problem may be mitigated by being considered in the sample design or by including independent variables that control for those factors in the multiple regression model.

The most used measures to capture the operating performance in previous post-acquisition studies are the return on assets (ROA) and the return on equity (ROE) (e.g., Pilloff, 1996; Ikeda and Doi, 1983; Cornett and Tehranian, 1992). The cash flow return is also an important measure to evaluate a firm's performance (Healy et al., 1992; Cornett and Tehranian, 1992).

Having in consideration previous studies and particularly Martynova et al. (2006), we will compare the firms' performance in the year before the deal (year -1) to the firms' performance in the three following years after the deal (year 1, 2 and 3), as a three-year period is considered the appropriate to reflect the impacts from a M&A. The deal year (year 0) is going to be excluded from the analysis for being affected by several other factors related to the deal operation and for including periods before and after the deal that might affect the results.

We will divide our operational performance analysis of hotel and lodging firms in two parts. First, we will start by comparing the evolution of our sample of firms (univariate analysis) with (and without) controlling for differences between companies that have done and companies that have not been involved in a M&A. After, we will use a multivariate analysis, specifically the *difference-in-difference*.

3.2.1 Univariate Analysis

To access the change of each relevant performance variables considered from the year before the deal to the three years after it, the following formula is going to be used:

$$\frac{x_i^{t+j} - x_i^{t-1}}{x_i^{t-1}} \quad (17)$$

where:

x - operational performance variable;

i - acquiring firm;

$t-1$ - previous year of the deal;

j - year after the acquisition for which we want to calculate the change of the performance measure (year 1, 3 and 3).

The variables considered in this analysis are going to be the total assets, EBIT and revenues.

In the case of the operational performance measures calculated as ratios (y), such as ROA, EBIT margin and Asset turnover will be estimated in changes in percentage points using the following formula:

$$y_i^{t+j} - y_i^{t-1} \quad (18)$$

The performance measures that are going to be used to analyse the performance of the acquiring firms are calculated as following:

$$ROA = \frac{EBIT}{assets} \quad (19)$$

$$Asset\ Turnover = \frac{sales}{assets} \quad (20)$$

$$EBIT\ Margin = \frac{EBIT}{sales} \quad (21)$$

Since the change in the operational performance measures can be explained by the change in the industry, to isolate the acquisition effect, we will control for the industry change, by subtracting our variable by the change observed in a similar company that had not been engaged in a merger and acquisition (control group). The difference will represent the adjusted impact, according to Healy et al. (1992).

To test whether the average difference before and after the acquisition is statistically different from zero, once again we will use the t-student test (parametric test) and the Wilcoxon signed-rank test (non-parametric test) that, as referred before, is not affected by the outliers making the results more robust and consistent.

3.2.2 Multivariate Analysis

To further analyse the long-term impact of an acquisition, a multivariate analysis is going to be used in this dissertation. The impact of an acquisition on the performance

of an hotel and lodging firm is defined as the difference between the firm's outcome when involved in an acquisition and the outcome that this firm would have if it had not been involved in an acquisition. This allows us to determine what would have been the hotel firm's performance if it had not been involved in an acquisition. In order to analyse this effect, the *difference-in-difference* (DID) approach is going to be used (Meyer, 1994; Heckman et al., 1997). In this approach, we compare the difference in the performance before and after the operation for the acquirer hotel firms to that in the outcome before and after this operation for a control group. This control group is comprised with hotel firms that were not involved in any acquisition. By doing this comparison, we can control for other factors that could have influenced the performance of the acquiring firms. One example of this is the elimination of the variations in the economic situation that could be wrongly attributed to an acquisition, since it is assumed that a variation in the economic situation affects all hotel firms in an identical way.

The effect of an acquisition is going to be determined using the following formula:

$$Y_{it}^1 - Y_{it}^0 \quad (22)$$

where:

- Y_{it}^1 is the outcome in period t (after the acquisition) for an hotel firm i which has been involved in an acquisition;
- Y_{it}^0 is the outcome for the same hotel firm if it was not subject to an acquisition, in the same period t .

When regressing the data collected across the two groups of firms (acquirers and non-acquirers), we reach to the following formula:

$$Y_{it} = \beta_0 + \beta_1 Dacquiring_i + \beta_2 Dpost_t + \beta_3 Dacquiring_i * Dpost_t + \beta_4 \log(Total Assets) + \varepsilon_{it} \quad (23)$$

The performance of an hotel firm will be determined by the ROA, EBIT margin and asset turnover.

$Dacquiring_i$ is a dummy variable that takes the value 1 for acquiring hotel firms and 0 otherwise. It controls for differences in constant performance between the

acquiring hotel firm and the control group. The dummy variable $Dpost_t$ was defined as taking the value 1 in the post acquiring years and 0 otherwise, for both acquiring and non-acquiring firms. The term $Dacquiring_i * Dpost_t$ is an interaction term between $Dacquiring_i$ and $Dpost_t$. Its coefficient β_3 represents the DID estimator of the effect of acquiring on the group of the acquiring firms (Table 1).

Table 1. Difference-in-difference estimator.

	Before	After	Difference
Acquiring Firms	$\beta_0 + \beta_1 + \beta_4$	$\beta_0 + \beta_1 + \beta_2 + \beta_3 + \beta_4$	$\beta_2 + \beta_3$
Control Group	$\beta_0 + \beta_4$	$\beta_0 + \beta_2 + \beta_4$	β_2
Difference	β_1	$\beta_1 + \beta_3$	β_3

In each variable, the model is going to be first estimated considering the all three years after the operation, i.e., it will compare the period after the operation with the period before and then each year after the operation will be considered individually.

The model will also include the variable $\log(Total Assets)$ to control for the companies' size and verify the robustness of the conclusions.

The selection process of the control group will be explained in the next chapter.

4. DATA COLLECTION

A sample containing all 417 successful mergers and acquisitions, occurred between 1997 and 2016, that both the acquirer and the target were hotels or similar accommodation and the acquirer was a listed company, at the time of the deal, was selected from Zephyr, Bureau Van Dijk, a comprehensive M&A database for all deals occurred in the world. After excluding deals involving the acquisition of less than 50% of the target capital and deals where the target's total assets represent less than 10% of the acquiring's total assets (in order to guarantee the significance of the transaction to the acquiring company), our sample was reduced to 54 deals.

In the case a firm acquired more than one company during one-year period only the first deal was considered. To analyse the impact in the operational performance of the acquiring firms, we need to measure the change of the operational performance indicators between the year before the transaction [-1] and the three following years [-1, +3] and so deals where accounting data for the acquiring company was not available for the year before the transaction and for at least one year after the transactions were also dropped. Our final sample is so composed by a total of 32 observations. The number of deals by year are presented in Figure 1.

Figure 1. Sample - number of deals by year.

Source: Zephyr.

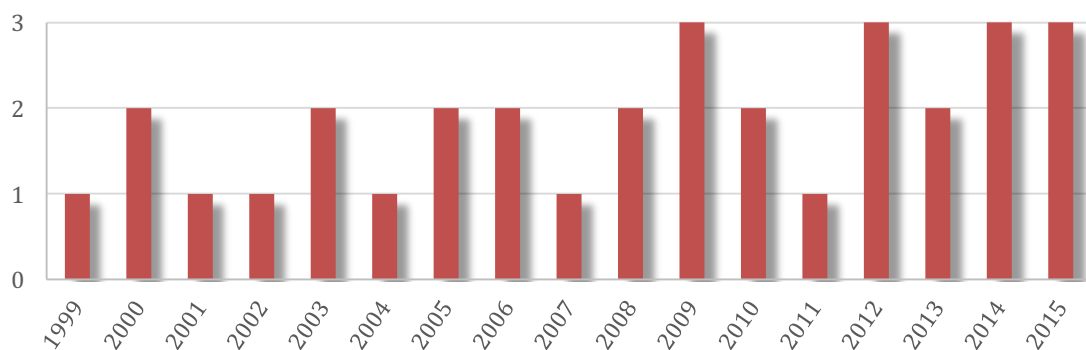


Table 2 show the number of deals by world region.

Table 2. *Sample – number of firms by world region.*

Source: Zephyr.

World Region	No. Firms
Africa	2
Asia	9
Europe	2
European Union	16
Northern America	1
Oceania	2
Total	32

Subsequently, when collecting the accounting information from Thomson Reuters, three deals had to be eliminated due to the lack of information. For the financial performance analysis, six more deals were dropped due to the huge illiquidity nature of the share in stock market. Therefore, we end up with with 29 deals in our sample for the operating performance analysis and 25 deals for the financial performance analysis.

4.1 Control Group

The control group was selected through the application of a matching method. The objective of this method is to select a group of companies similar to the acquiring companies before the acquisition but that they were not involved in a M&A deal. So, each company in our sample was paired with another that is the most alike as possible, but which have not been involved in an acquisition. This control group allow us to analyse the results of both acquiring and non-acquiring firms and eliminate the variations caused by external factors such as the economic situation which is assumed to affect all hotel firms in an identical way. Whilst, without a control group the possible external factors outcomes could be wrongly attributed to the result of an acquisition. The purpose of this method is to find a proxy for the change that any firm in our sample would have if they were not involved in the acquisition of another hotel as they had.

To accomplish this objective, we choose firms from the hotel and lodging industry that were not involved in any M&A transactions and have similar size (measured by the total assets) and operating performance (measured by the ROA) of each firm in our sample, in the year before the acquisition.

From the initial 1,523 listed firms from the Travel and Leisure industry collected from the Thomson Reuters Datastream, we chose, for each firm in our sample, the firms that have an amount of total assets around 95 and 105% of the total assets of the firms in our sample, in the year before the acquisition. From those companies, we selected the company with the nearest ROA.

Finally, after selecting 29 non-acquiring firms, together with the 29 acquiring firms involved in an M&A operation, our final sample of the accounting-based measure methodology is composed by 58 firms in total.

5. DESCRIPTIVE ANALYSIS

In this chapter, the descriptive statistics for both the acquiring companies (acquiring group) and the control companies (control group) are going to be presented in the year before the acquisition (year -1).

5.1 Descriptive Statistics

Table 3 exhibits the differences between the acquiring group and the control group in the period before the acquisition.

Observing Table 3, it can be seen the difference between the mean and median of all variables is significant, suggesting the presence of a wide range of firm sizes and the presence of outliers. Consequently, the analysis on this dissertation will be centred mainly on the median since, in the presence of outliers, it reflects a more realistic idea of a ‘central measure’ than the average.

As shown in Table 3, the sales of the acquiring group were 22% lower than the control group. However, the EBIT of acquiring group was 20% higher when compared with the control group. Nonetheless, as expected (since was one the criteria used to choose the control group) the amount of total assets of both groups, in the period before the acquisition, is the same.

Moreover, none of these differences is statistically significant before the acquisition and so we can conclude that the companies from the acquiring group and from the control group are similar.

Table 3. *Financial statement main variables - Comparison between the two groups.*

This table reports the summary statistics for the sample of 29 firms for the acquiring group plus 29 firms for the control group. The sample period begins in 1999 and ends in 2015. The variables sales, EBIT and total assets are referred to the year before the acquisition. All values presented are in millions of US dollars. All differences between the acquiring group and the control group are not statistical significant. Source: own calculations.

	Acquiring Group	Control Group
Panel A: Sales		
Mean (\$ million)	599.5	561.9
Median (\$ million)	87,9	113.2
Panel B: EBIT		
Mean (\$ million)	95.4	73.6
Median (\$ million)	16.5	13.7
Panel C: Total Assets		
Mean (\$ million)	1,108.1	1,111. 8
Median (\$ million)	306.0	305.5

5.2 Firms' Operating Performance Before the Deal

Table 4 displays the differences between the acquiring group and the control group for the firms' operating performance before the acquisition.

As it can be seen in the table 4, there is a difference in the ROA median results with a significance level of 5% indicating that the acquiring group was more profitable when using their assets to generate earnings than the control group. This was mainly due to a better EBIT margin as the acquiring group presents a worse asset turnover ratio than the control group. These are significant at 1% and 10% confidence level respectively, although in the case of the turnover ratio just for the average (t-test). The higher EBIT margin from the acquiring group compared to the control group indicates that the acquiring firms have higher earnings ability that could be mainly due to more efficient cost management or better revenue management. However, a lower turnover ratio in the acquiring group suggest that they are not using their assets as productively/efficiently as the control group.

Table 4. Firms' performance in the year before the acquisition- Comparison between the two groups.

This table reports the summary statistics for the sample of 29 firms for the acquiring group plus 29 firms for the control group. The sample period begins in 1999 and ends in 2015. The variables ROA, EBIT margin and asset turnover are referred to the year before the acquisition. ROA is the return-on-assets ratio computed as EBIT over total assets. EBIT margin ratio was computed as EBIT over sales. Asset turnover ratio was computed as sales over total assets. The acquiring group and the control group columns are presented in percentage. The difference column is presented in percentage points. Source: own calculations. The classification ***, **, * denotes for 1%, 5% and 10% significance level.

	Acquiring Group	Control Group	Difference
ROA			(p.p.)
Mean (%)	7.44	6.21	0.01
Median (%)	6.11	4.93	0.01 **
EBIT Margin			(p.p.)
Mean (%)	20.80	12.36	0.08 ***
Median (%)	20.01	12.90	0.07 ***
Asset Turnover			(p.p.)
Mean (%)	48.30	86.10	-0.38 *
Median (%)	41.62	43.33	-0.02

In sum, even though the acquiring firms and the control group firms are similar (by construction), before the acquisition, in terms of size and ROA, the acquiring firms were more profitable (although slightly less efficient) in that year. This higher profitability may have led to the decision of acquiring another company from the same industry since higher profitability means more cash flow and more confidence in the management competence.

6. RESULTS

In this chapter, it will be presented the results achieved by the application of the different methodologies mentioned previously to answer the dissertation main question: Does hotel operational and shareholder's performance increase after acquiring another hotel?

6.1 Short-Term

Table 5 show the abnormal returns for the shareholders around the announcement day over the following event windows: $[-10, +5]$, $[-10, -5]$, $[-5, 0]$ and $[0, +5]$.

The results show that for the entire window $[-10, +5]$ the cumulative abnormal return is positive for all models but is never statistically significant which suggest that the acquisition of another company of the hotel and lodging industry did not produce any wealth gains for the acquiring shareholders.

However, when looking only for the window of $[-10, -5]$, the results suggest that before the announcement day the market generally expects that an acquisition would be announced and that the acquisition would benefit the bidder shareholders as the cumulative abnormal return is positive and statistically significant during that period, for all models.

Then, the results also suggest that after the announcement of the acquisition, the investor were not anymore expecting the deal would create value to the bidder shareholders as the cumulative abnormal return is negative for the window $[0, +5]$, for all models. Although the values are not statistically significant, they are enough to cancel the positive trend that occurred in the window $[-10, -5]$. Consequently, it is not possible to reject H_0 and to state that M&A operations that occurred since 1999 created or destroyed value to acquiring shareholders of the hotel and lodging industry.

The evidence of insignificant effects on the wealth of bidder shareholders is also reported by Kim et al. (2008) and Hsu and Jan (2006).

Table 5. Cumulate abnormal returns.

This table reports the cumulative average abnormal share returns (CAAR) for acquirers calculated over the announcement period, which is calculated from day -10 to day +5, where day 0 is the announcement day. The columns 2 to 4 present shorter event windows amongst the announcement period. The abnormal return is calculated relative to the Market Index. Source: own calculations. MM = market model; MAM = market-adjusted model; CMRM = constant mean return model. The classification ***, **, * denotes for 1%, 5% and 10% significance level.

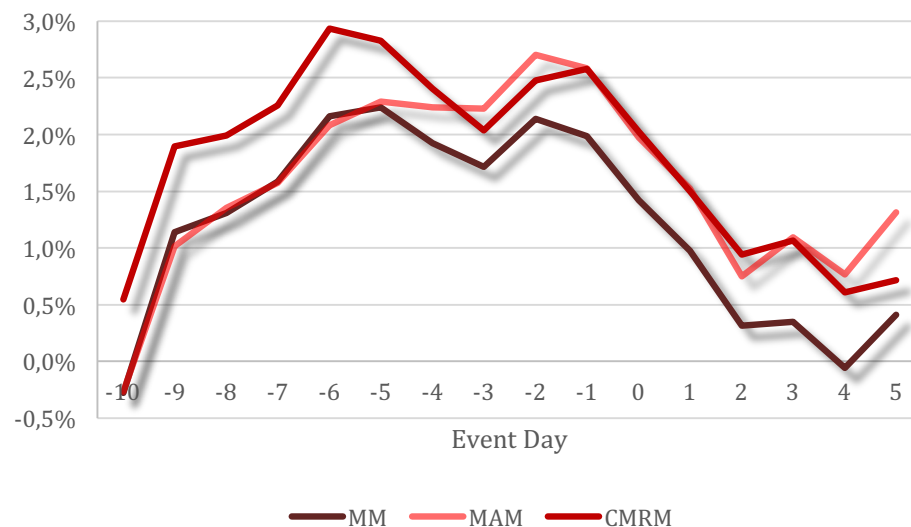
	Event Window			
	[-10; +5]	[-10; -5]	[-5; 0]	[0; +5]
Panel A: MM				
CAAR (%)	0.41	2.24	-0.74	-1.57
Parametric test	0.759	0.134	0.393	0.188
Signed-rank test	0.696	0.065 *	0.427	0.326
N	25	25	25	25
Panel B: MAM				
CAAR (%)	1.31	2.29	-0.11	-1.27
Parametric test	0.342	0.108	0.910	0.308
Signed-rank test	0.300	0.026 **	0.638	0.476
N	25	25	25	25
Panel C: CMRM				
CAAR (%)	0.72	2.82	-0.91	-1.86
Parametric test	0.611	0.025 **	0.298	0.181
Signed-rank test	0.419	0.045 **	0.427	0.346
N	25	25	25	25

This conclusion can be confirmed when looking to Figure II that depicts the cumulative average abnormal returns from the 10th day before the announcement until 5th day after. First, when analysing [-10, -5] period of the event, it can be seen that the acquiring firms are over performing the market as the abnormal cumulative returns become positive. Clearly, there is an increase in the stock prices in that period before the acquisition (change that is also statistically significant as seen before). This increase in CAARs may be a result of information leakage inside the market regarding the intention of the hotel and lodging firms to acquire another hotel, thus investors predict a positive effect in the company value. This period is followed by a 5-day period of stagnation of the stock prices where the market waits for the announcement rumours to

be confirmed. After this period, when there is the confirmation and the information is released, the cumulative returns decrease and the cumulative abnormal return tends to zero. This result suggest that after the announcement the market changes its interpretation as more evidence regarding the deal operation is unveiled and investors are able to make more concrete examinations to the deal outcomes. The evidence indicate that the investors end up considering the deal as neutral (neither value created or destroyed) since all the accumulated value is lost after the announcement.

Figure II. *Evolution of CAARs around the announcement day.*

This figure presents the CAARs around the announcement day [-10, +5] for the different models applied in this dissertation. The announcement day is the day 0. MM = market model; MAM = market-adjusted model; CMRM = constant mean return model. Source: own calculations.



6.2 Long-Term

6.2.1 Univariate Analysis

In the univariate analysis, the change of each individual variable and ratio will be examined in order to understand the impact of acquisitions in the hotel and lodging industry on the operational performance.

As before, we will focus particularly on the median results in order to exclude the effects of outliers presented in our sample.

The raw and adjusted change for the different variables will be computed from the period before the acquisition to the average of the three years after plus the post years individually. The adjusted change will be computed by subtracting the sector median change in the performance measure to the change in the performance measure of the acquiring firms. This procedure removes the macroeconomic factors that may affect the results of both groups equally.

6.2.1.1 Main Variables

Observing the Panel A in Table 6, it is possible to see that the sales of the acquiring firms increase after the acquisition and although the change in all three years is statistically significant, the effect tends to decline over time. Moreover, when adjusted by the change in the sales of the control group, the change is not significant anymore. This suggests that the change in the sales after the acquisition is, at least, partly explained by the sector change during the same period. These results seem to be contradictory, since it is expected that after a merger or acquisition, the sales of any entity (hotels or not) would increase. These results differ from the findings of Kim (2006) that surprisingly found negative and statistically significant change in sales.

Regarding the EBIT, Panel B in Table 6 show that the change (raw and adjusted) after the acquisition is mainly negative but not statistically significant. These results indicate that the acquisition of firms in the hotel and lodging industry do not affect the operating profit of the acquiring firms.

The change observed in the total assets after the acquisition is very similar to the change observed in the sales. However, the adjusted change of the acquiring group is statistically significant at the first year after the acquisition and for the average of the three years after the acquisition (Panel C, Table 6). This positive effect in the total assets variable is expected since when a firm acquires another it also acquires some (if not all) of the target firm's assets.

Generally, we can say that acquisition of hotel and lodging firms have a positive effect on both the acquiring sales and total assets, as expected.

Table 6. Main variable change.

This table displays the change of three variables analysed in this study. In order to know if the change of the variables is significant or not, we did the Wilcoxon Signed Rank Test for the median results. The mean results are not presented since they are affected by the presence of outliers. The adjusted median change is given by the median change subtracted by the industry change that may affect the results of both groups equally. In the first column, the change of the three years after the acquisition in relation to the year before is presented. In the following columns, the change of the first, second and third years after the acquisition in relation to the year before is displayed. Source: own calculations. The classification *, **, ***, correspond to the statistical significance at the 10%, 5%, and 1% level for Wilcoxon Signed Rank Test.

	From -1 to 3y	From -1 to +1	From -1 to +2	From -1 to +3
Panel A: Sales				
Median change (%)	26.17 ***	24.28 ***	22.16 **	11.79 **
Adjusted Median change (%)	6.45	-0.59	-1.45	-0.11
Panel B: EBIT				
Median change (%)	-7.04	4.23	-10.18	-16.00
Adjusted Median change (%)	-2.90	-2.13	-7.12	-2.46
Panel C: Total Assets				
Median change (%)	47.98 ***	30.11 ***	14.23 ***	17.41 ***
Adjusted Median change (%)	15.28 **	16.35 ***	6.51	1.53

6.2.1.2 Performance Measures

Table 7 presents the change after the acquisition of the performance ratios: return-on-assets (ROA), EBIT margin and asset turnover ratios.

Analysing first the ROA ratio, table 7 show that the median changes are negative and statistically significant for the first and second year after the acquisition and for the three-year average after the acquisition. When comparing these results to the adjusted median changes, they are very similar. This suggests that the acquisitions do not generate positive effects in the performance of the acquiring hotel and lodging firms. These results are consistent with Hsu and Jang (2006) that indicate that three years after the acquisition, the ROA is lower than before and so the results indicate acquisition have a declining effect on the performance of the hotel and lodging firms. These evidence is, however, not consistent with the findings of Kim (2006).

Table 7 also show that the change of the EBIT margin, in the three years after the acquisition is negative and statistically significant, even when adjusting for the change in the control group change. This suggests that the acquisition affect negatively the acquiring firms, perhaps due to higher integration costs.

Regarding the asset turnover ratio (Panel C, Table 7), there is negative but not statistically significant change after the acquisition. This ratio measures of how effectively a firm generates sales form its assets, therefore a lower ratio is negative impact of the acquiring firm's operating performance. Therefore, these results indicate that the acquiring firms, after the acquisition are not using their assets in an efficiently manner. These evidence is also not consistent with the findings of Kim (2006).

Essentially, the acquisition has a negative impact on the profitability of the firm. This negative change can be due to the acquisition itself or it can be simply a consequence of the good (punctual) performance verified in the previous year of the acquisition. Nonetheless, if it was due to the former, the acquisition should not have been finalized since it has worsened the profitability of the acquiring firms, if not the higher profitability of the acquiring firms was not a sign of a better management team, and so should not have been the reason for the acquisition.

Table 7. Main ratio change.

This table displays the change of three variables analysed in this study. In order to know if the change of the variables is significant or not, we did the Wilcoxon Signed Rank Test for the median results. The mean results are not presented since they are affected by the presence of outliers. The adjusted median change is given by the median change subtracted by the industry change that may affect the results of both groups equally. In the first column, the change of the three years after the acquisition in relation to the year before is presented. In the following columns, the change of the first, second and third years after the acquisition in relation to the year before is displayed. Source: own calculations. The classification *, **, ***, correspond to the statistical significance at the 10%, 5%, and 1% level for Wilcoxon Signed Rank Test.

	From -1 to 3y	From -1 to +1	From -1 to +2	From -1 to +3
Panel A: ROA				
Median change (p.p.)	-1.80 **	-1.48 **	-2.13 **	-1.67
Adjusted Median change (p.p.)	-2.21 *	-1.01 **	-2.18 **	-1.63
Panel B: EBIT Margin				
Median change (p.p.)	-3.95 **	-3.00 **	-5.32 ***	-5.72 **
Adjusted Median change (p.p.)	-3.70 **	-2.67 **	-5.44 ***	-4.87 **
Panel C: Asset Turnover				
Median change (p.p.)	-0.70	0.20	-1.90	-1.62
Adjusted Median change (p.p.)	-1.02	-0.28	-1.82	-2.04

6.2.2 Multivariate Analysis

As stated before the long-term effects of acquiring a firm from the hotel and lodging industry in the operating performance of the acquiring firm was also studied through a OLS estimation of a *difference-in-difference* model.

As explained before, the model includes a variable dummy, *Dacquiring*, that takes the value 1 for acquiring firms and 0 otherwise, another variable dummy, *Dpost*, that takes the value 1 in the post-acquisition years and 0 otherwise and an interactive dummy (*Dacquiring*Dpost*) that captures the effect of the acquisition.

For each operating performance variable, the model was first estimated considering the three years after the acquisition, i.e., just comparing the period after the acquisition with the period before (columns (1) to (4)) and then considering each year after the acquisition individually (columns (5) to (8)). Therefore, in models (5) to (8), the variable *Dpost* and the interactive dummy *Dacquiring*Dpost* were replaced by

different dummy variables for each year after the acquisition: the variables *Dpost1*, *Dpost2* and *Dpost3* and the variables *Dacquiring*Dpost1*, *Dacquiring*Dpost2* and *Dacquiring*Dpost3*, respectively.

The model was also estimated with and without the controlling variable *log(Total Assets)* to verify the robustness of the conclusions.

6.2.2.1 ROA

Table 8 displays the results obtained by the regression of our *difference-in-difference* model using as endogenous variable the return-on-assets ratio. The differences between the acquiring and non-acquiring firms are not statistically significant, thus the acquisition has no significant impact even though the coefficients associated to the variables *Dacquiring*Dpost* (that represents the effect of the acquisition) are negative but not statistically different from zero, which suggests that the profitability did not change after the acquisition. The same is true for the coefficients associated to the dummy variables for each year after the acquisition.

The addition of the control variable *log (total assets)* in columns (4) and (8) has positive and statistically significant coefficients at a 1% level, indicating that the performance of a firm can be influenced by its size, i.e. bigger firms tend to present higher margins.

These results are not consistent with the univariate analysis which indicates that the profitability is negative and statistically significant. As the multivariate analysis examines more than a single variable and it controls for other factors that may influence the results, it gives a more compound and realistic idea than analysing only a single variable. It also provides a powerful test of significance when compared to the univariate methods. Therefore, these results are more robust and suggest that acquisition do not affect the profitability of acquiring firms.

Table 8. The effect of acquisitions on ROA ratio.

This table gives detail regarding the impact of acquisitions in the return-on-assets ratio for the three years after the acquisition. First, we analyse the three years in an aggregated manner, from columns (2) to (4) and second, we analyse the three years after the acquisition separately, from columns (5) to (8). This model has as dependent variable the ROA. The model also has a control variable in order to control the influence of the firm's size. Standard errors are reported under the coefficient in parenthesis. Source: own calculations. The *, **, *** indicates if the results are statically significant for a level of 10%, 5% and 1%, respectively.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dacquiring	-0.012 (0.011)	-0.000 (0.011)	0.012 (0.015)	0.012 (0.015)		-0.007 (0.008)	0.012 (0.016)	0.012 (0.015)
Dpost		-0.012 (0.011)	0.000 (0.015)	-0.001 (0.015)				
Dpost1					-0.017 (0.011)	-0.017 (0.011)	-0.004 (0.016)	-0.005 (0.015)
Dpost2					-0.008 (0.012)	-0.008 (0.012)	0.007 (0.016)	0.004 (0.016)
Dpost3					-0.007 (0.012)	-0.007 (0.012)	0.004 (0.017)	0.002 (0.016)
Dacquiring*Dpost			-0.025 (0.022)	-0.028 (0.021)				
Dacquiring*Dpost1							-0.025 (0.022)	-0.028 (0.022)
Dacquiring*Dpost2							-0.031 (0.023)	-0.032 (0.022)
Dacquiring*Dpost3							-0.023 (0.024)	-0.025 (0.023)
Log(Total Assets)				0.020 *** (0.007)				0.021 *** (0.005)
Constant	0.068 *** (0.008)	0.068 *** (0.009)	0.062 *** (0.011)	-0.044 (0.037)	0.068 *** (0.008)	0.072 *** (0.009)	0.062 *** (0.011)	-0.051 * (0.029)
N	116	116	116	116	214	214	214	214

6.2.2.2 EBIT Margin

Table 9 show the results of our DID model with the EBIT margin as proxy for operating performance, i.e., dependent variable.

As shown previously in the descriptive statistic, our model confirms that the acquiring firms achieved before the acquisition higher EBIT margins than non-acquiring firms. The coefficient associated to *Dacquiring* is always positive and statistically different from zero. However, the acquisitions have no effect on EBIT margin as, even though the coefficients associated to the variables *Dacquiring*Dpost* are almost always negative they are not statistically different from zero.

Effectively, a decrease in the EBIT margin is noted after an acquisition as the coefficients associated to *Dpost* in models (5) and (6) are negative and statistically significant, yet the decrease does not occur exclusively in the acquiring firms.

Finally, the coefficients associated with *log (total assets)* are positive and statistically significant, suggesting that larger firms tend to have higher margins.

Table 9. The effect of acquisitions on EBIT margin ratio.

This table gives detail regarding the impact of acquisitions in the EBIT margin ratio for the three years after the acquisition. First, we analyse the three years in an aggregated manner, from columns (2) to (4) and second, we analyse the three years after the acquisition separately, from columns (5) to (8). This model has as dependent variable the EBIT margin. The model also has a control variable in order to control the influence of the firm's size. Standard errors are reported under the coefficient in parenthesis. Source: own calculations. The *, **, *** indicates if the results are statically significant for a level of significance of 10%, 5% and 1%, respectively.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dacquiring	-0.049 * (0.030)	0.051 * (0.029)	0.084 ** (0.041)	0.084 ** (0.040)		0.035 * (0.020)	0.084 ** (0.038)	0.084 ** (0.037)
Dpost		-0.049 * (0.029)	-0.016 (0.041)	-0.019 (0.040)				
Dpost1					-0.054 ** (0.027)	-0.054 ** (0.027)	-0.019 (0.038)	-0.020 (0.037)
Dpost2					-0.031 (0.028)	-0.031 (0.028)	0.008 (0.040)	0.002 (0.038)
Dpost3					-0.050 * (0.028)	-0.050 * (0.028)	-0.024 (0.040)	-0.029 (0.039)
Dacquiring*Dpost			-0.067 (0.059)	-0.073 (0.057)				
Dacquiring*Dpost1							-0.071 (0.054)	-0.078 (0.052)
Dacquiring*Dpost2							-0.078 (0.056)	-0.082 (0.054)
Dacquiring*Dpost3							-0.053 (0.057)	-0.057 (0.055)
Log(Total Assets)				0.049 *** (0.018)				0.047 *** (0.012)
Constant	0.166 *** (0.021)	0.140 *** (0.025)	0.124 *** (0.029)	-0.142 (0.100)	0.166 *** (0.019)	0.148 *** (0.022)	0.124 *** (0.027)	-0.131 * (0.071)
N	116	116	116	116	214	214	214	214

6.2.2.3 Asset Turnover

Finally, the results of our model using the asset turnover (scale efficiency) as endogenous variable are presented in Table 10.

Contrary to the EBIT margin, the results suggest that acquiring firms present before the acquisition a lower asset turnover ratio than the non-acquiring firms. The coefficients associated to the *Dacquiring* is always negative and statistically different from zero, except for model (1).

The acquisition has no effect in the productivity of the acquiring forms as the coefficients associated to the interactive dummy *Dacquiring*Dpost* are not statistically significant. The same is true for the coefficients associated to the interactive dummy variables for each year after the acquisition.

The addition of the control variable *log (total assets)* in columns (4) and (8) suggest that larger firms tend to present worst productivity.

The *difference-in-difference* model, though hurt by the reduced number of observations it ends up confirming the previous conclusions – acquiring firms' profitability decrease after the acquisition. However, the results of these models (as well as the entire study) should be read with some care and certain reservations due to the reduced size of the sample.

Table 10. The effect of acquisitions on asset turnover ratio.

This table gives detail regarding the impact of acquisitions in the asset turnover ratio for the three years after the acquisition. First, we analyse the three years in an aggregated manner, from columns (2) to (4) and second, we analyse the three years after the acquisition separately, from columns (5) to (8). This model has as dependent variable the asset turnover. The model also has a control variable in order to control the influence of the firm's size. Standard errors are reported under the coefficient in parenthesis. Source: own calculations. The *, **, *** indicates if the results are statically significant for a level of significance of 10%, 5% and 1%, respectively.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dacquiring	-0.018 (0.150)	-0.445 *** (0.144)	-0.378 * (0.205)	-0.377 * (0.202)		-0.464 *** (0.113)	-0.378 * (0.219)	-0.376 * (0.215)
Dpost		-0.018 (0.144)	0.048 (0.205)	0.062 (0.202)				
Dpost1					-0.040 (0.160)	-0.040 (0.154)	0.026 (0.219)	0.030 (0.215)
Dpost2					-0.011 (0.166)	-0.011 (0.160)	0.044 (0.228)	0.071 (0.223)
Dpost3					0.033 (0.168)	0.033 (0.162)	0.089 (0.230)	0.117 (0.226)
Dacquiring*Dpost			-0.134 (0.289)	-0.112 (0.285)				
Dacquiring*Dpost1							-0.131 (0.310)	-0.098 (0.304)
Dacquiring*Dpost2							-0.110 (0.322)	-0.091 (0.316)
Dacquiring*Dpost3							-0.113 (0.326)	-0.092 (0.319)
Log(Total Assets)				-0.193 ** (0.089)				-0.219 *** (0.071)
Constant	0.672 *** (0.106)	0.894 *** (0.125)	0.861 *** (0.145)	1.905 *** (0.503)	0.672 *** (0.113)	0.904 *** (0.123)	0.861 *** (0.155)	2.048 *** (0.413)
N	116	116	116	116	214	214	214	214

7. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

The main objective of this dissertation was to test whether acquisitions between hotels create value to the acquiring hotels' shareholders.

In the past three decades, M&A activity of hotels and lodging firms increased tremendously becoming an interesting and opportune topic to be studied. However, the results of previous (scarce) literature are not consistent regarding the acquirers short and long-term post-acquisition returns.

This study intends to overcome such problems by using both market data and accounting data to examine the M&A effects on the short and long-term of acquiring hotel and lodging firms whose acquisitions occurred between 1999 and 2015.

An event study analysis based on the CAARs around the announcement day for the short-term analysis and a univariate and a multivariate analysis for the long-term effects were performed.

The results regarding the short-term effects of acquirers in the hotel and lodging industry showed that in general there is a neutral effect in the firms' value around the announcement day, except for day -10 until day -5 where are presented wealth gains for the "future" acquiring firms' shareholders. However, this "gain" is short living as tend to disappear once the acquisition is announced. This evidence of insignificant effects in our study is consistent with Kim et al. (2008) and Hsu and Jan (2006).

According to our univariate analysis, the acquisitions of hotel and lodging firms have a positive effect on both sales and total assets variables. Regarding the profitability of the firms, the acquisition has a negative impact, as the profitability measures tend to (significantly) decrease after the acquisition. Even though this decrease can be either due to the acquisition itself or simply a consequence of the good (punctual) performance verified in the year before the acquisition. Nonetheless, in any case the acquisition did not add any value to the acquiring shareholder. These results are not consistent with the findings of Kim (2006).

Then, a *difference-in-difference* model was estimated. The results of the model, using the ROA and asset turnover ratios as dependent variables (as proxy for operating performance) suggest that the acquisition is neutral in terms of operating performance. Although, if the EBIT margin is used as dependent variable, the results suggest a

decrease (statistically significant) of the operating performance of acquiring firms, the decrease also happened to non-acquiring firms.

In sum, the results of this dissertation allow us to conclude that the short (financial) and long-term (operating) performance of acquiring hotel and lodging firms does not change significantly after the acquisition as most of the evidence suggest a neutral impact.

This dissertation however has some limitations that should be taken in consideration when interpreting the findings. The small sample size (due to lack of data available) and the lack of information regarding some factors like the type of payments and type of merger that were not controlled in this study, are some examples. Additionally, other events, that may affect the stock prices of the firms, such as an acquisition announcement of a major competitor, were not also considered. Despite these limitations, it is believed that this study has a significant impact on both the financial and operational performance analysis of acquiring firms in the hotel and lodging industry.

Finally, this dissertation can be extended for future research, specifically increasing the sample size to obtain more robust results. Other types of performance measures such as market share and operational efficiencies, for instance average daily rate (ADR), occupancy rate and revenue per available room (RevPAR), would be worthy indicators. However, it is difficult to collect that information. There is also the possibility to analyse the impact of acquisitions in hospitality-related areas (travel and leisure industry) such as gaming industry, airlines, theme parks, restaurants and other leisure services.

REFERENCES

- Agrawal, A., Jaffe, J. F. and Mandelker, G. N. (1992). "The post-merger performance of acquiring firms: A re-examination of an anomaly". *The Journal of Finance*, 47(4), 1605-1621.
- Andrade, G., Mitchell, M. and Stafford, E. (2001). "New evidence and perspectives on mergers". *Journal of Economic Perspectives*, 15(2), 103-120.
- Armitage, S. (1995). "Event study methods and evidence on their performance". *Journal of economic surveys*, 9(1), 25-52.
- Asquith, P. (1983). "Merger bids, uncertainty, and stockholder returns". *Journal of Financial Economics*, 11(1), 51-83.
- Aw, M. S. B. and Chatterjee, R. A. (2004). "The performance of uk firms acquiring large cross-border and domestic takeover targets". *Applied Financial Economics*, 14(5), 337-349.
- Biggadike, R. (1989). The risky business of diversification *Readings in strategic management* (pp. 177-190): Springer.
- Binder, J. (1998). "The event study methodology since 1969". *Review of quantitative Finance and Accounting*, 11(2), 111-137.
- Bouwman, C. H. S., Fuller, K. and Nain, A. S. (2009). "Market valuation and acquisition quality: Empirical evidence". *Review of Financial Studies*, 22(2), 633-679.
- Brown, S. J. and Warner, J. B. (1985). "Using daily stock returns: The case of event studies". *Journal of Financial Economics*, 14(1), 3-31.
- Bühner, R. (1991). "The success of mergers in germany". *International Journal of Industrial Organization*, 9(4), 513-532.
- Campa, J. M. and Hernando, I. (2004). "Shareholder value creation in european m&as". *European Financial Management*, 10(1), 47-81.
- Canina, L. (2001). Good news for buyers and sellers: Acquisitions in the lodging industry. *Cornell Hotel and Restaurant Administration Quarterly*, pp. 47-54.
- Chatfield, H. K., Chatfield, R. and Dalbor, M. (2012). "Returns to hospitality acquisitions by method of payment". *The Journal of Hospitality Financial Management*, 20(1), 1-16.
- Chatterjee, R. A. (2000). "The financial performance of companies acquiring very large takeover targets". *Applied Financial Economics*, 10(2), 185-191.

Conn, R. L., Cosh, A., Guest, P. M. and Hughes, A. (2005). "The impact on uk acquirers of domestic, cross-border, public and private acquisitions". *Journal of Business Finance & Accounting*, 32(5-6), 815-870.

Cornett, M. M. and Tehranian, H. (1992). "Changes in corporate performance associated with bank acquisitions". *Journal of Financial Economics*, 31(2), 211-234.

Croci, E. (2007). "Corporate raiders, performance and governance in europe". *European Financial Management*, 13(5), 949-978.

Datta, S., Iskandar-Datta, M. and Raman, K. (2001). "Executive compensation and corporate acquisition decisions". *The Journal of Finance*, 56(6), 2299-2336.

Dickerson, A. P., Gibson, H. D. and Tsakalotos, E. (1997). "The impact of acquisitions on company performance: Evidence from a large panel of uk firms". *Oxford Economic Papers*, 49(3), 344-361.

Dodd, P. and Ruback, R. (1977). "Tender offers and stockholder returns". *Journal of Financial Economics*, 5(3), 351-373.

Firth, M. (1980). "Takeovers, shareholder returns, and the theory of the firm". *The Quarterly Journal of Economics*, 94(2), 235-260.

Franks, J., Harris, R. and Titman, S. (1991). "The postmerger share-price performance of acquiring firms". *Journal of Financial Economics*, 29(1), 81-96.

Franks, J. R., Broyles, J. E. and Hecht, M. J. (1977). "An industry study of the profitability of mergers in the united kingdom". *The Journal of Finance*, 32(5), 1513-1525.

Franks, J. R. and Harris, R. S. (1989). "Shareholder wealth effects of corporate takeovers". *Journal of Financial Economics*, 23(2), 225-249.

Goel, A. M. and Thakor, A. V. (2010). "Do envious ceos cause merger waves?". *Review of Financial Studies*, 23(2), 487-517.

Gort, M. (1969). "An economic disturbance theory of mergers". *The Quarterly Journal of Economics*, 624-642.

Gorton, G., Kahl, M. and Rosen, R. (2005). Eat or be eaten: A theory of mergers and merger waves: National Bureau of Economic Research.

Gregory, A. (1997). "An examination of the long run performance of uk acquiring firms". *Journal of Business Finance & Accounting*, 24(7-8), 971-1002.

- Gregory, A. and McCorriston, S. (2005). "Foreign acquisitions by uk limited companies: Short- and long-run performance". *Journal of Empirical Finance*, 12(1), 99-125.
- Gross, K. (2007). Equity ownership and performance: An empirical study of german traded companies: Springer Science & Business Media.
- Harford, J. (2005). "What drives merger waves?". *Journal of Financial Economics*, 77(3), 529-560.
- Healy, P. M., Palepu, K. G. and Ruback, R. S. (1992). "Does corporate performance improve after mergers?". *Journal of Financial Economics*, 31(2), 135-175.
- Heckman, J. J., Ichimura, H. and Todd, P. E. (1997). "Matching as an econometric evaluation estimator: Evidence from evaluating a job training programme". *The review of economic studies*, 64(4), 605-654.
- Henderson Jr, G. V. (1990). "Problems and solutions in conducting event studies". *Journal of Risk and Insurance*, 282-306.
- Higson, C. and Elliott, J. (1998). "Post-takeover returns: The uk evidence". *Journal of Empirical Finance*, 5(1), 27-46.
- Hsu, L.-T. J. and Jang, S. S. (2007). "The postmerger financial performance of hotel companies". *Journal of hospitality & tourism research*.
- Ikeda, K. and Doi, N. (1983). "The performances of merging firms in japanese manufacturing industry: 1964-75". *The Journal of Industrial Economics*, 257-266.
- Jensen, M. C. and Ruback, R. S. (1983). "The market for corporate control: The scientific evidence". *Journal of Financial Economics*, 11(1), 5-50.
- Jovanovic, B. and Rousseau, P. L. (2002). The q-theory of mergers: National Bureau of Economic Research.
- Jovanovic, B. and Rousseau, P. L. (2008). "Mergers as reallocation". *The Review of Economics and Statistics*, 90(4), 765-776.
- Kennedy, V. A. and Limmack, R. J. (1996). "Takeover activity, ceo turnover, and the market for corporate control". *Journal of Business Finance & Accounting*, 23(2), 267-285.
- Kim, D. J. (2006). The post-acquisition performance in the hotel and restaurant industries. Oklahoma State University.

Kim, D. J., Kim, W. G. and Kim, S. H. (2008). *The post-acquisition performance in the hospitality industry*. Paper presented at the Proceedings of 2008 International CHRIE Conference, Renaissance Waverly Hotel Atlanta, Georgia, USA.

Kim, J.-Y. and Canina, L. (2013). "Acquisition premiums and performance improvements for acquirers and targets in the lodging industry". *Cornell Hospitality Quarterly*, 54(4), 416-425.

Kim, K.-H. and Olsen, M. D. (1999). "Determinants of successful acquisition processes in the us lodging industry". *International Journal of Hospitality Management*, 18(3), 285-307.

Kwansa, F. A. (1994). "Acquisitions, shareholder wealth and the lodging sector: 1980-1990". *International Journal of Contemporary Hospitality Management*, 6(6), 16-20.

Lang, L. H. P., Stulz, R. and Walkling, R. A. (1989). "Managerial performance, tobin's q, and the gains from successful tender offers". *Journal of Financial Economics*, 24(1), 137-154.

Langetieg, T. C. (1978). "An application of a three-factor performance index to measure stockholder gains from merger". *Journal of Financial Economics*, 6(4), 365-383.

Limmack, R. J. (1991). "Corporate mergers and shareholder wealth effects: 1977-1986". *Accounting & Business Research (Wolters Kluwer UK)*, 21(83), 239-251.

Loderer, C. and Martin, K. (1992). "Postacquisition performance of acquiring firms". *Financial Management*, 69-79.

Loughran, T. I. M. and Vijh, A. M. (1997). "Do long-term shareholders benefit from corporate acquisitions?". *The Journal of Finance*, 52(5), 1765-1790.

Lubatkin, M. (1983). "Mergers and the performance of the acquiring firm". *The Academy of Management Review*, 8(2), 218-225.

Ma, Q., Zhang, W. and Chowdhury, N. (2011). "Stock performance of firms acquiring listed and unlisted lodging assets". *Cornell Hospitality Quarterly*, 52(3), 291-301.

MacKinlay, A. C. (1997). "Event studies in economics and finance". *Journal of economic literature*, 35(1), 13-39.

Malatesta, P. H. (1983). "The wealth effect of merger activity and the objective functions of merging firms". *Journal of Financial Economics*, 11(1), 155-181.

Mandelker, G. (1974). "Risk and return: The case of merging firms". *Journal of Financial Economics*, 1(4), 303-335.

Mantravadi, P. and Vidyadhar Reddy, A. (2008). "Type of merger and impact on operating performance: The indian experience". *Economic and Political Weekly*, 43(39), 66-74.

Martynova, M., Oosting, S. and Renneboog, L. (2006). "The long-term operating performance of european mergers and acquisitions". *ECGI-Finance Working Paper*(137).

Martynova, M. and Renneboog, L. (2008). "A century of corporate takeovers: What have we learned and where do we stand?". *Journal of Banking & Finance*, 32(10), 2148-2177.

Martynova, M. and Renneboog, L. (2011). "The performance of the european market for corporate control: Evidence from the fifth takeover wave". *European Financial Management*, 17(2), 208-259.

Meyer, B. D. (1995). "Natural and quasi-experiments in economics". *Journal of business & economic statistics*, 13(2), 151-161.

Mitchell, M. L. and Mulherin, J. H. (1996). "The impact of industry shocks on takeover and restructuring activity". *Journal of Financial Economics*, 41(2), 193-229.

Mitchell, M. L. and Stafford, E. (2000). "Managerial decisions and long-term stock price performance". *The Journal of Business*, 73(3), 287-329.

Moeller, S. B., Schlingemann, F. P. and Stulz, R. M. (2004). "Firm size and the gains from acquisitions". *Journal of Financial Economics*, 73(2), 201-228.

Morck, R., Shleifer, A. and Vishny, R. W. (1990). "Do managerial objectives drive bad acquisitions?". *The Journal of Finance*, 45(1), 31-48.

Peterson, P. P. (1989). "Event studies: A review of issues and methodology". *Quarterly journal of business and economics*, 36-66.

Pilloff, S. J. (1996). "Performance changes and shareholder wealth creation associated with mergers of publicly traded banking institutions". *Journal of Money, Credit and Banking*, 28(3), 294-310.

Reza, Y., Stuart, L. and Jenny, G. (2014). "Acquisition returns: Does industry matter?". *Studies in Economics and Finance*, 31(3), 309-324.

Rhoades, S. A. (1994). "Summary of merger performance studies in banking, 1980-93, and an assessment of the operating performance and event study methodologies, a". *Fed. Res. Bull.*, 80, 589.

Rhodes-Kropf, M. and Viswanathan, S. (2004). "Market valuation and merger waves". *The Journal of Finance*, 59(6), 2685-2718.

Rhodes-Kropf, M., Robinson, D. T. and Viswanathan, S. (2005). "Valuation waves and merger activity: The empirical evidence". *Journal of Financial Economics*, 77(3), 561-603.

Roll, R. (1986). "The hubris hypothesis of corporate takeovers". *Journal of business*, 197-216.

Scherer, F. M. (1988). "Corporate takeovers: The efficiency arguments". *The Journal of Economic Perspectives*, 2(1), 69-82.

Serra, A. P. (2004). "Event study tests: A brief survey". *Gestão. Org-Revista Eletrônica de Gestão Organizacional*, 2(3), 248-255.

Servaes, H. (1991). "Tobin's q and the gains from takeovers". *The Journal of Finance*, 46(1), 409-419.

Sheel, A. and Nagpal, A. (2000). "The post-merger equity value performance of acquiring firms in the hospitality industry". *The Journal of Hospitality Financial Management*, 8(1), 37-45.

Shleifer, A. and Vishny, R. W. (2003). "Stock market driven acquisitions". *Journal of Financial Economics*, 70(3), 295-311.

Sudarsanam, S. and Mahate, A. A. (2003). "Glamour acquirers, method of payment and post-acquisition performance: The uk evidence". *Journal of Business Finance & Accounting*, 30(1-2), 299-342.

Toxvaerd, F. (2008). "Strategic merger waves: A theory of musical chairs". *Journal of Economic Theory*, 140(1), 1-26.

Wilcoxon, F. (1945). "Individual comparisons by ranking methods". *Biometrics bulletin*, 1(6), 80-83.

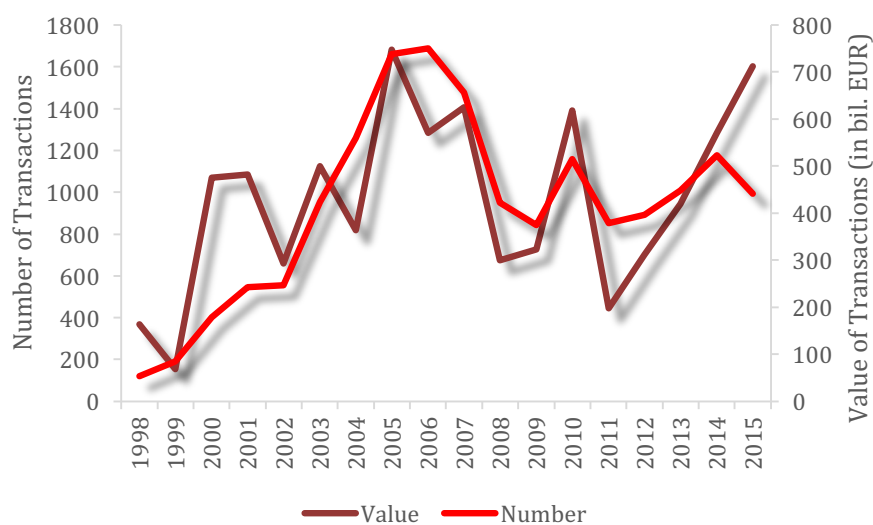
Yaghoubi, R., Yaghoubi, M., Locke, S. and Gibb, J. (2016). "Mergers and acquisitions: A review. Part 1". *Studies in Economics and Finance*, 33(1), 147-188.

Yang, J., Qu, H. and Kim, W. G. (2009). "Merger abnormal returns and payment methods of hospitality firms". *International Journal of Hospitality Management*, 28(4), 579-585.

ANNEXES

Annex 1. Trend in hospitality firms' mergers and acquisitions.

This figure presents the total number and the total value of acquisitions made by (public and private) hotel and lodging companies between 1998 and 2015. During this period, there was a total of 7,436 deals involving acquirers or targets from the hotel and lodging sector. The values are expressed in billions of Euros. Source: own calculations considering information of Zephyr database.



Annex 2. Main measures of financial performance.

This table presents the main measures of financial performance used in the literature review of similar studies regarding mergers and acquisitions. Source: Gross, K. (2007). Equity ownership and performance: An empirical study of german traded companies: Springer Science & Business Media.

Measure	Definition	Representative Studies
Market-based measures		
Cumulated abnormal returns (CAR)	Cumulated abnormal stock returns from a single unexpected event.	Eckbo and Smith, 1998]; Lewellen et al., 1985; Loderer and Martin, 1997; Seyhun, 1986; Slovin and Sushka, 1993.
Market returns (MR)	Growth in stock value over a specific period assuming that dividends are reinvested.	Chaganti and Damanpour, 1991; Holl, 1977; Kim et al., 1988; Stano, 1976.
Accounting-based measures		
Return on equity (ROE)	Net earnings after interest expenses and taxes divided by shareholders' equity.	Demsetz and Lehn, 1985; Kamerschen, 1968; Monsen et al., 1968; Palmer, 1973b; Short and Keasey, 1999.
Return on assets (ROA)	Earnings before interest expenses and taxes (EBIT) divided by total assets.	Denis and Denis, 1994; Himmelberg et al., 1999; Kole, 1996; Mehran, 1995; Oswald and Jahera Jr., 1991.
Return on investment (ROI)	Earnings divided by value of equity plus long-term debt.	Gugler et al., 2003a, 2004; Schellenger et al., 1989.
Earnings per share (EPS)	Earnings divided by number of outstanding shares.	Kesner, 1987; Kim et al., 1988.

Annex 3. Main results of prior studies in mergers and acquisitions post-acquisition performance.

This table summarises prior studies on announcement abnormal returns of mergers and acquisitions for firms involved in mergers and acquisitions; while most studies provide abnormal returns for acquirers, a number of previous studies also report combined abnormal returns for target firms.

Results	Target/Acquirer	Author(s)
Positive abnormal returns	Target	Asquith, 1983; Malatesta, 1983; Frank and Harris, 1989; Firth, 1980; Limmack, 1991; Franks et al, 1991.
Negative abnormal returns	Acquirer	Langetieg, 1978; Asquith, 1983; Agrawal et al, 1992; Jensen and Ruback, 1983); Firth, 1980; Limmack, 1991; Buhner, 1991; Kennedy and Limmack, 1996; Gregory, 1997; Loughran and Vijh, 1997; Mitchell and Stafford, 2000; Sudarsanam and Mahate, 2003; Aw and Chatterjee, 2004; Croci, 2007; Bouwman et al., 2009; Malatesta, 1983; Yaghoubi et al., 2014.
No abnormal returns		Franks et al, 1991; Loderer and Martin, 1992; Franks et al., 1977; Dodd and Ruback, 1977; Frank and Harris, 1988; Higson and Elliott, 1998; Chatterjee, 2000; Datta et al., 2001; Andrade et al, 2001; Conn et al., 2004; Gregory and McCorriston, 2005.
Positive abnormal returns		Mandelker, 1974; Moeller et al., 2004; Healy et al., 1992.

Annex 4. Main methodological aspects of similar short-term studies.

This table summarises prior studies on short-term results of similar studies of mergers and acquisitions in the hotel and lodging industry. Prior studies typically document positive short-term returns for both acquirers and targets. MM = market model; CAR = cumulative abnormal returns; MR = mean return; JMM = Jensen measure model.

Author(s)	Sample period	No. of Obs.	Estimation period (days)	Event window (days)	Methodology	Results	
						Acquirers	Targets
Kwansa (1994)	1980-1990	8	-200, -51	-30, +30	MM CAR	-	Positive
Canina (2001)	1982-2000	7	-111, -12	-1, +1	MR AR	Positive	Positive
Hsu and Jan (2006)	1985-2000	5/23 ¹¹	-250, -51	-5, +5	JMM/ MM CAR	Negative	-
Kim (2006)	1980-2004	1 ¹²	-200, -51	-10, +10	MM CAR	Negative	Positive
Kim et al (2008)	1980-2004	91/5	-200, -51	-10, +10	MM CAR	Positive	Positive
Ma et al. (2011)	1981-2006	52 ¹³	-	-2, +2	MM CAR	Positive	-
Chatfield et al. (2012)	1985-2004	82 ¹⁴	-240, -61	-1, 0	MM CAR	Positive	-

¹¹ The sample consisted of 15 acquiring firms for market measure performance analysis and 23 firms for accounting measure performance analysis.

¹² For the market-based measures Kim (2006) studied 91 hotel firms (38 acquirers and 53 targets) plus 159 restaurants firms (79 acquirers and 80 targets) and for the accounting-based measures a total of 14 firms were analysed (5 hotel firms and 9 restaurant firms).

¹³ Their sample consisted on a total of 452 transactions by publicly traded acquirers of 34 listed and 418 unlisted targets.

¹⁴ The number of hotel firms included in the study was 119.

Annex 5. Main methodological aspects of similar long-term studies.

This table summarises prior studies on long-term results of similar studies of mergers and acquisitions in the hotel and lodging industry. Prior studies typically document negative long-term returns for acquirers and positive long-term returns for targets. MM = market model; CAR = cumulative abnormal returns; JMM = Jensen measure model; ROA = return-on-assets ratio; ROE = return-on-equity ratio; Op.CFA = operating cash flow to assets ratio; SA = sales to asset ratio; ΔS = change in sales.

Author(s)	Sample period	No. of Obs.	Event window (months)	Methodology	Results	
					Acquirers	Targets
Sheel and Nagpal (2000)	1980-1990	21	-6, +36	JMM/ MM CAR	Negative	-
Hsu and Jan (2006)	1985-2000	15/2316	-36, +36	ROA/ROE	Negative	-
Kim (2006)	1980-2004	9117	-60, +60	ROA/ROE/Op.CFA/SA/ΔS	Negative	Positive
Yang et al. (2009)	1996-2007	19	0, +12	JMM CAR	Positive	-

¹⁵ The estimation period analysed in this study was from the -36 until the -7 month.

¹⁶ The sample consisted of 15 acquiring firms for market measure performance analysis and 23 firms for accounting measure performance analysis.

¹⁷ For the market-based measures Kim (2006) studied 91 hotel firms (38 acquirers and 53 targets) plus 159 restaurants firms (79 acquirers and 80 targets) and for the accounting-based measures a total of 14 firms were analysed (5 hotel firms and 9 restaurant firms).